MISSOURI BOTANICAL GARDEN
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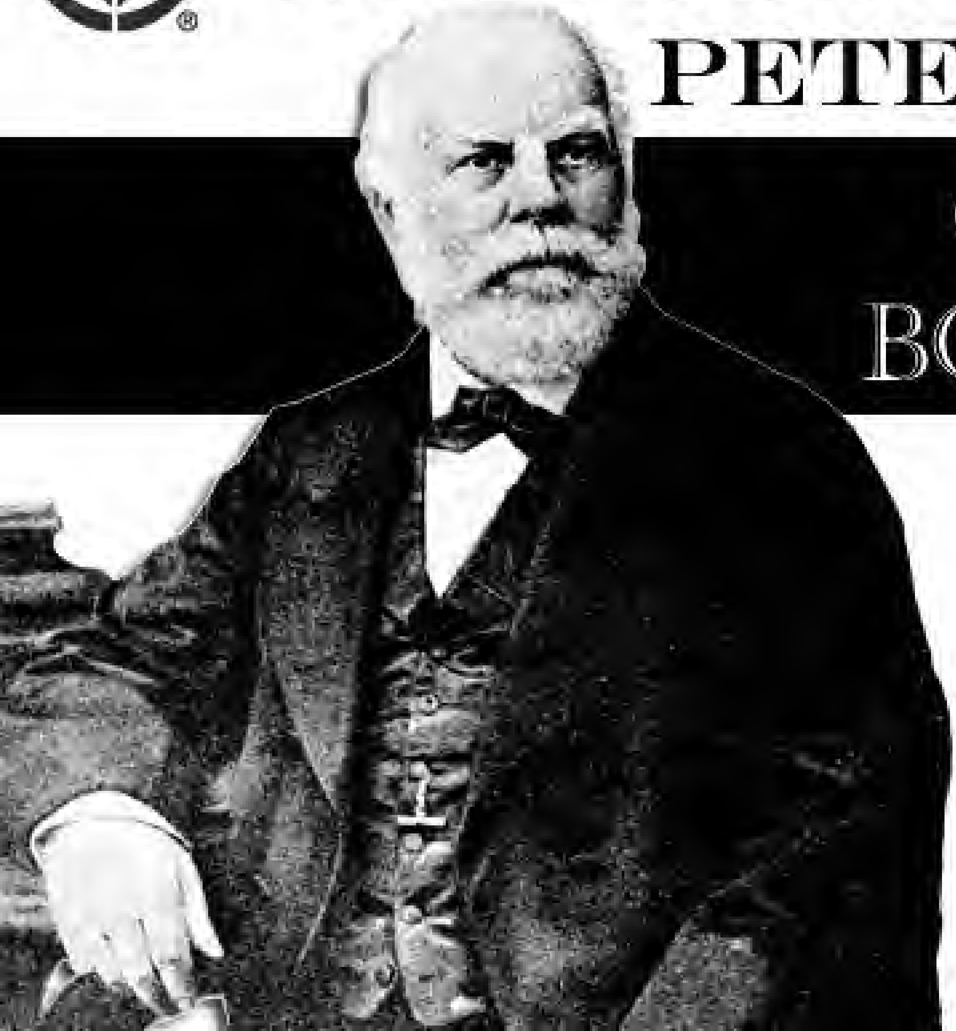
# GEORGE ENGELMANN BOTANICAL NOTEBOOKS



Pagination Note:
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Linosyris (Chrysothamnus)
Chr.

L. viridiflora (fide Gray) glaberrima, fol. uninervis, scabride supra tenuissime (puberulis sub lente), integris

involucrum = graveolens 5 flor
flor 1/3 exsertis
papp. tubo corollae brevior
dentibus corollae brevissimi

Yellowstone
Hayden

Scarcely different from L. graveolens, but seems to be Hookers plant (Fl. Bor. II. 24

3724

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Linosyris (Chrysothamnus)

~~sq. exteriora pulverulenta~~

1 L. graveolens Invol. pauciflor valde inaequale, flores (1/3) exserti; pappus corollae tubum fere aequans corolla profundius 5 dentata

yellowstone

~~Fendler 352~~

2 L. g. — — pappus cor. tubum vix aequans corolla breviter 5 dentata. Wright 184

3, L. g. = 1. sed sq. ext. glabriusculis s. viridulis Fendler 352

4, L. g. = 1: sed pappo flore fere aequante copiosiore, corolla ~~brevius~~ dentata.

Sweetwater

Omnes arachnoideae s. tomentulosae

var ~~pallida~~ glaberrima glaberrima, papp. corollam subaequans, fl. 1/3 exserti. corolla profund 5 dentata

Timpanogos

over

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over.

1 (mss 2 & 3

L. graveolens foliis ~~integerrimis~~ New)

crassiusculis, margine crasso obtuso integerrimo — lanc. lineari s. plano-lin. cun.

involucri squamis paucioribus valde inaequalibus 5-flori

floribus 1/3-1/2 exsertis

pappo tubo corollae aequante s. superante

a. glaberrima

β. Nuttallii fol. glab. caule pulverul. (not seen)

γ. tomentosa fol. et caule tomentoso

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Chrysothamnus sect. of Linosyris

Species

- graveolens
albicaulis
- viscidiflora = pumilus Nutt
depressa Nutt Pl. Gamb 171 see Pl. Wr. I. 96
viscidiflora var. puberula Bound Colo 80
resinosa (Ericameria) Nutt ?
near the last ibid.

- pulchella Gr. Pl. Wr. I. 96. Torr. in Sitgr. t. 4
Pl. Whipp. p. 99
Bigelovii Gr. Whipp. p. 98. t. 12
fol. filiform viscid.
(probably Wislizenus Plant)
- serrulata Torr. Stansb. p. 389
= viscidifl. var. Gray Wr. II 80

Chrysothamnus pumilus = viscidifl.
Nutt. Phil. Trans. 1841 p. 323
—— speciosus ibid = graveolens var.

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Linosyris (Chrysothamnus) pumila Gray — Pl. Wr. 2. p. 80 note
L. serrulata Torr. Stansb. p. 389
(= Chrysothamnus pumilus Nutt. Transact. p. 323.
(low growth and often pubescent branches)
(& 3 nerved leaves

Capitulis minoribus corymbosis
(nec corymboso-fastigiatis)
floribus vix exsertis (s. sol. 1/2)
brevioribus; tubo profunde dentato.
pappo corollam fere aequante

Humilis glabra s. scabro-pubera
fol. planis brevibus rigidis ~~supra asperis~~ scabris
infra puberulentis s. glabellis
1-3 nerviis, margine ciliolatis s.
serrulato spinulosis sub lente
capitulis ut supra 3-4 floris
~~pappo profunde dentato~~

Bridges pass. Timpanogos, Sweetwater

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Nov 1860

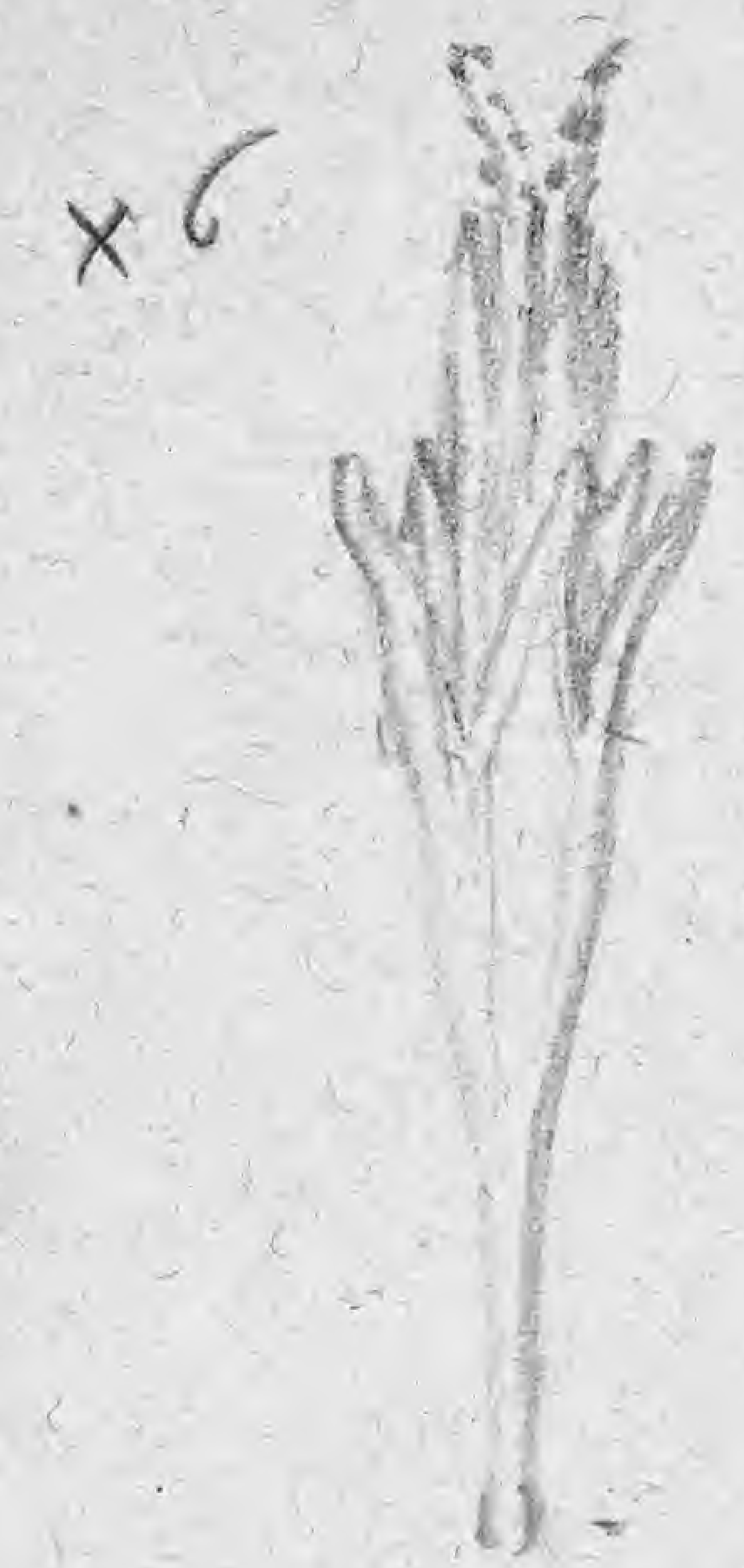
Linosyris serrulata Torr

Utah 20 Aug. 1859

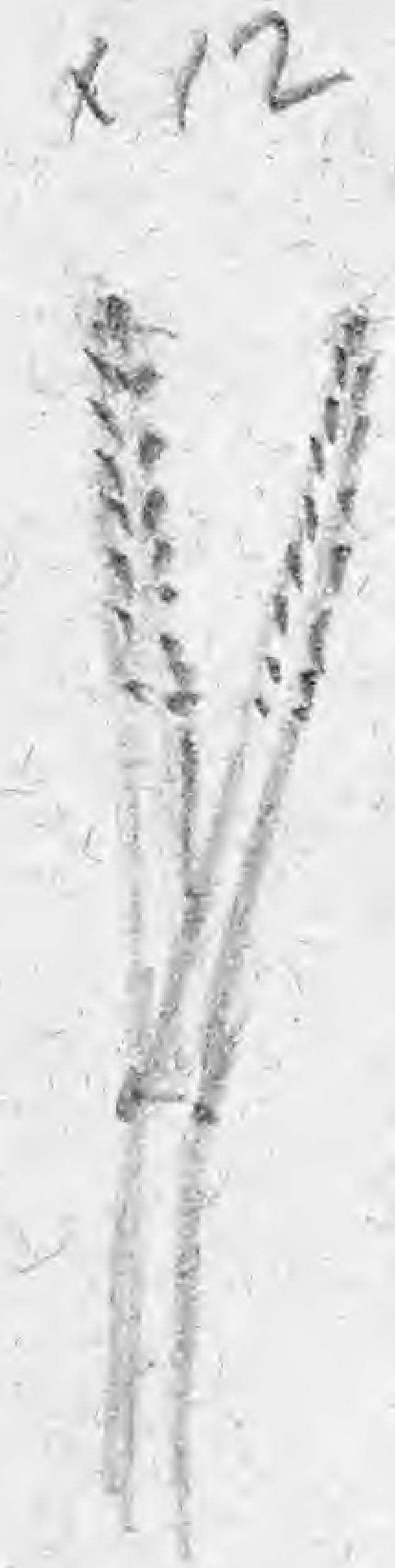
L. pumila Nutt

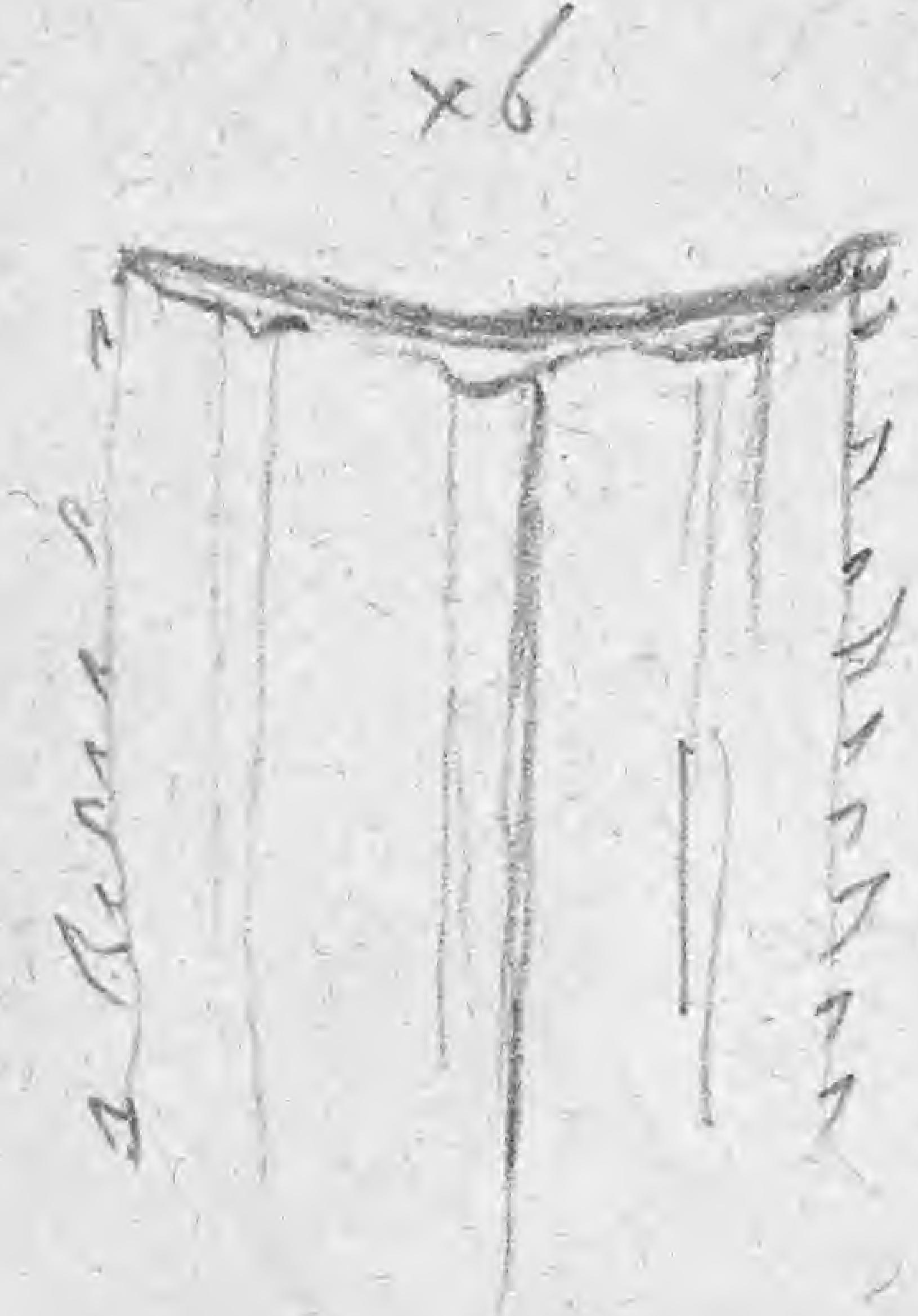
und Chrysothamnus

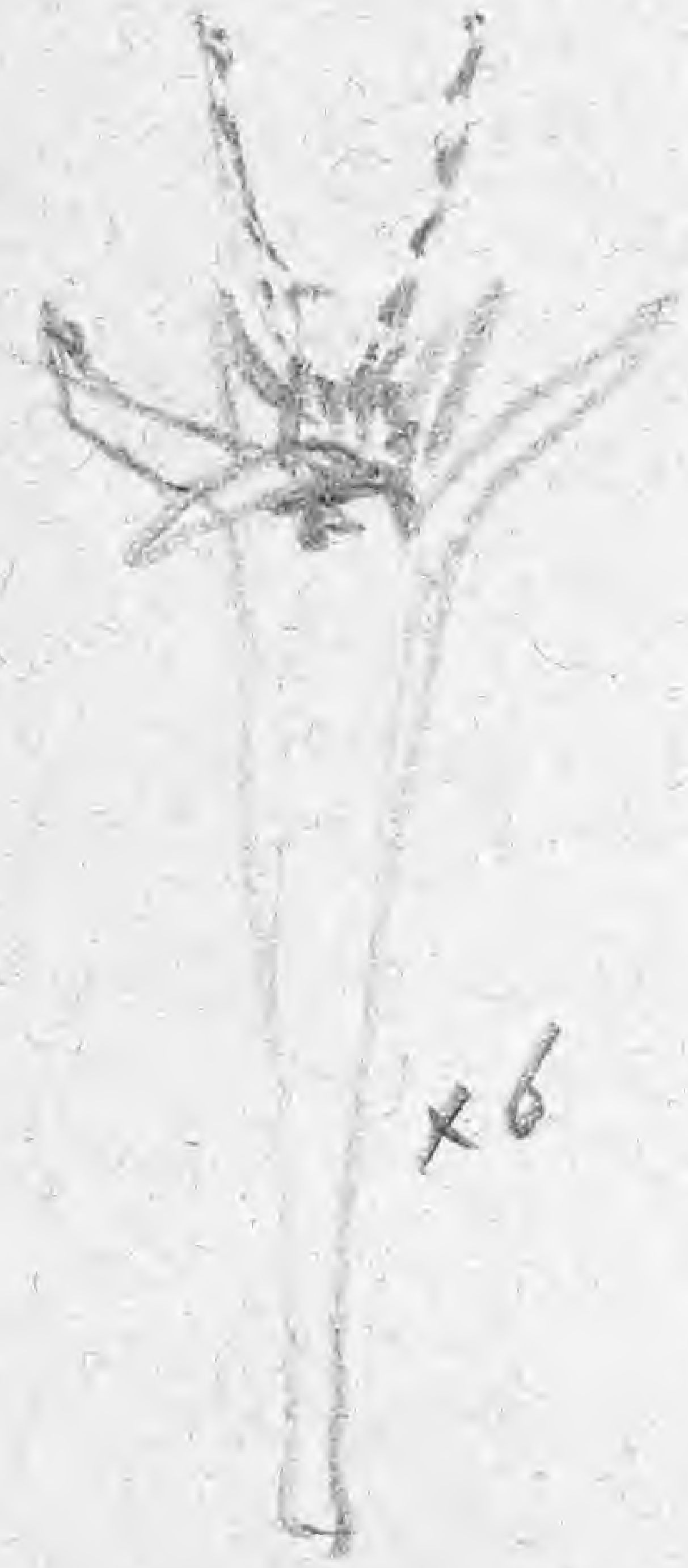
= L. viridiflora Hook

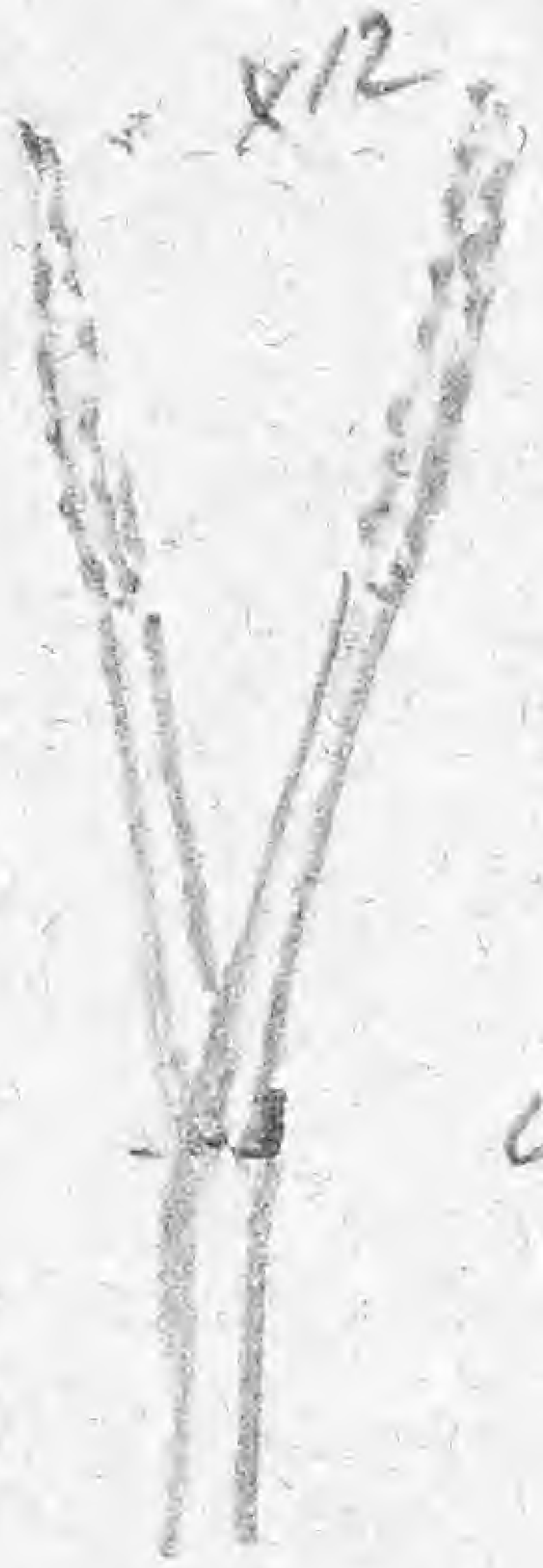


antheris exsertis









Bridgers Pass

Aug. 1856

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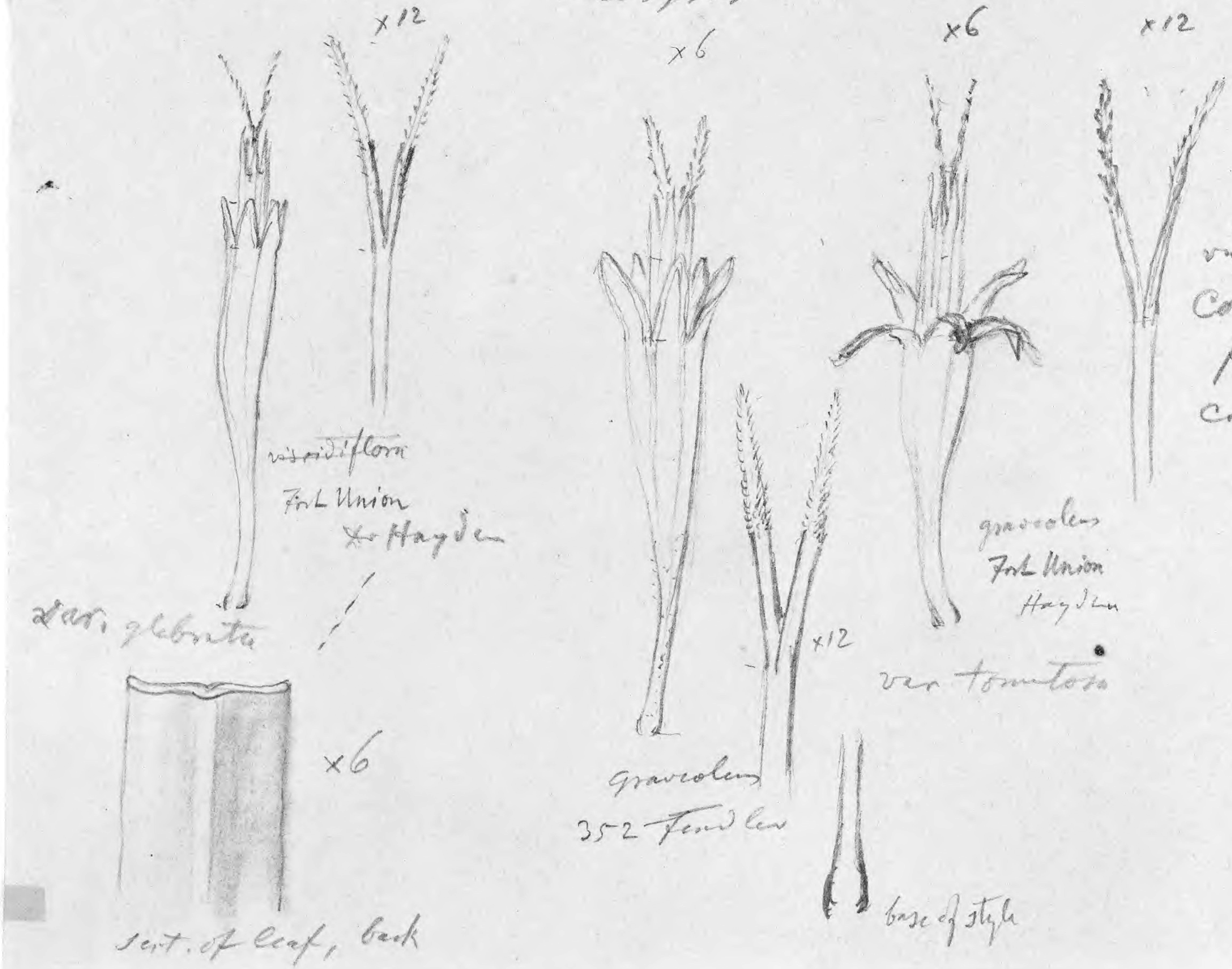
Leosyris

Nov 1868



flores 1/3 exserti

pappus parcior
valde inaequalis
Corollae tubum
fere aequans
Corolla profundius
5-fida

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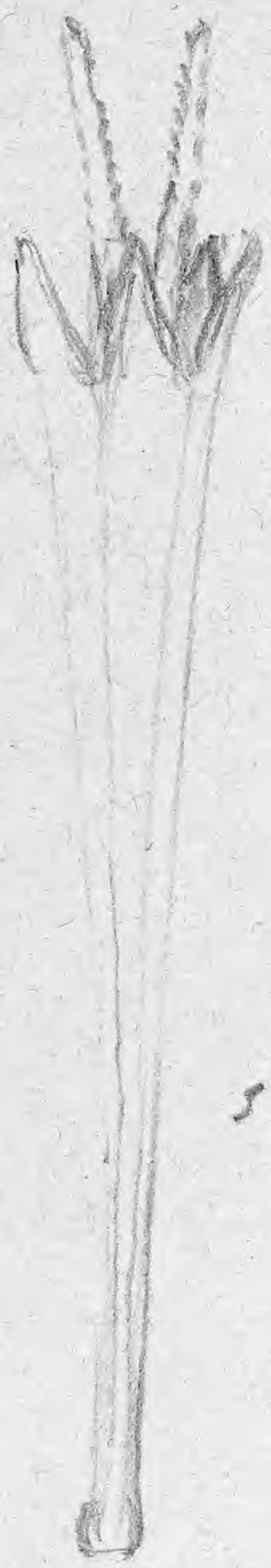
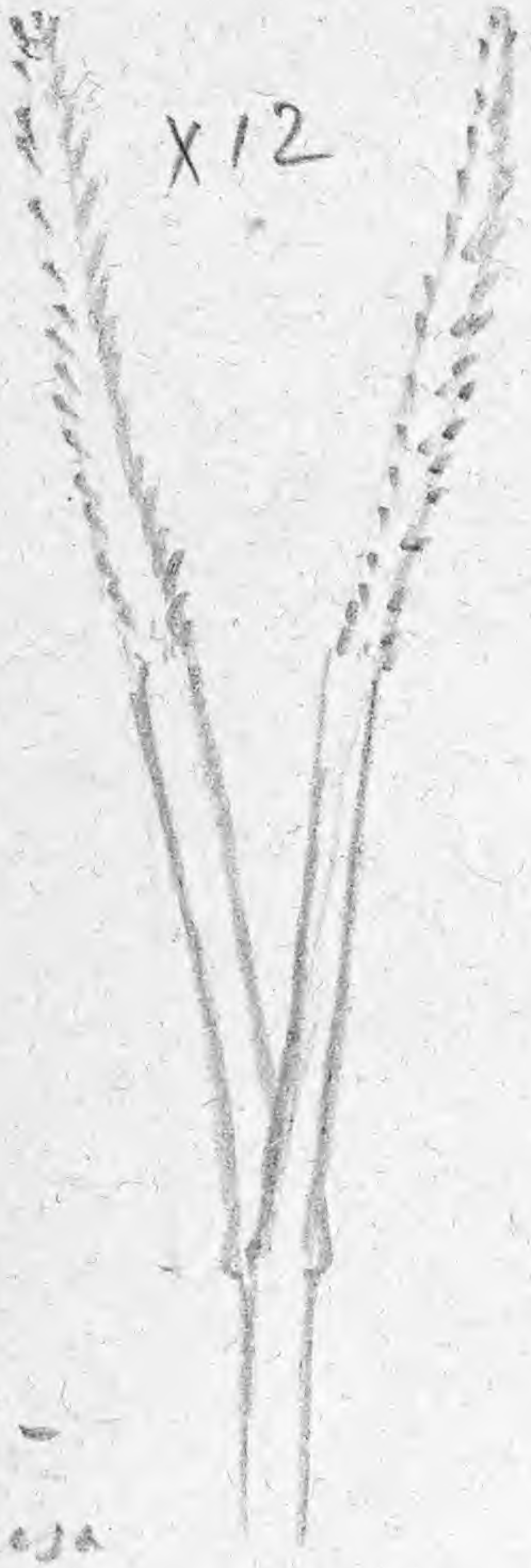
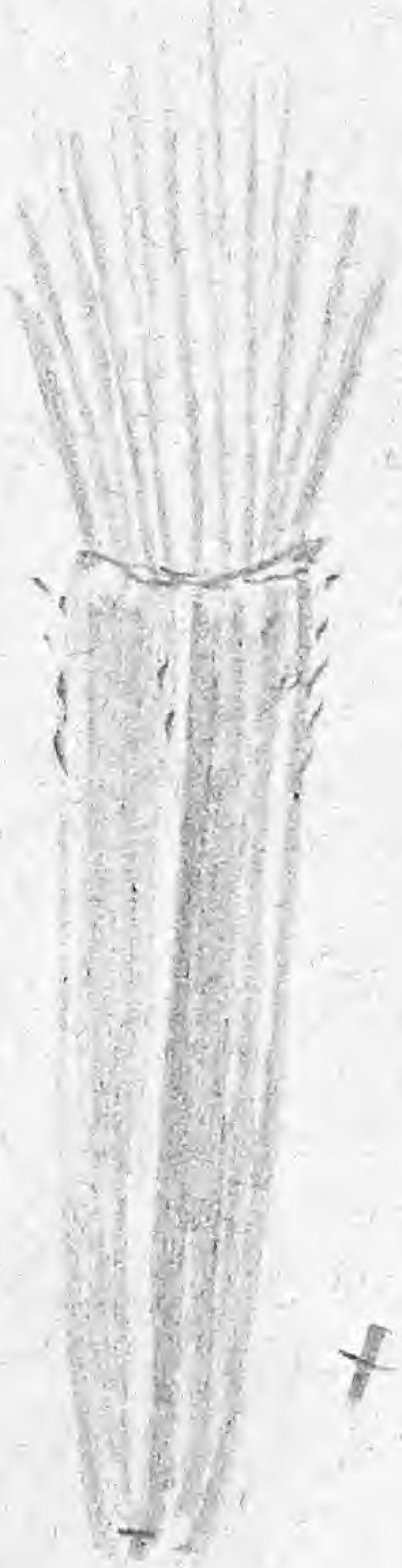
Nov 1860

Leucopsis pulchella



stami-
inodosa





ripe fruit

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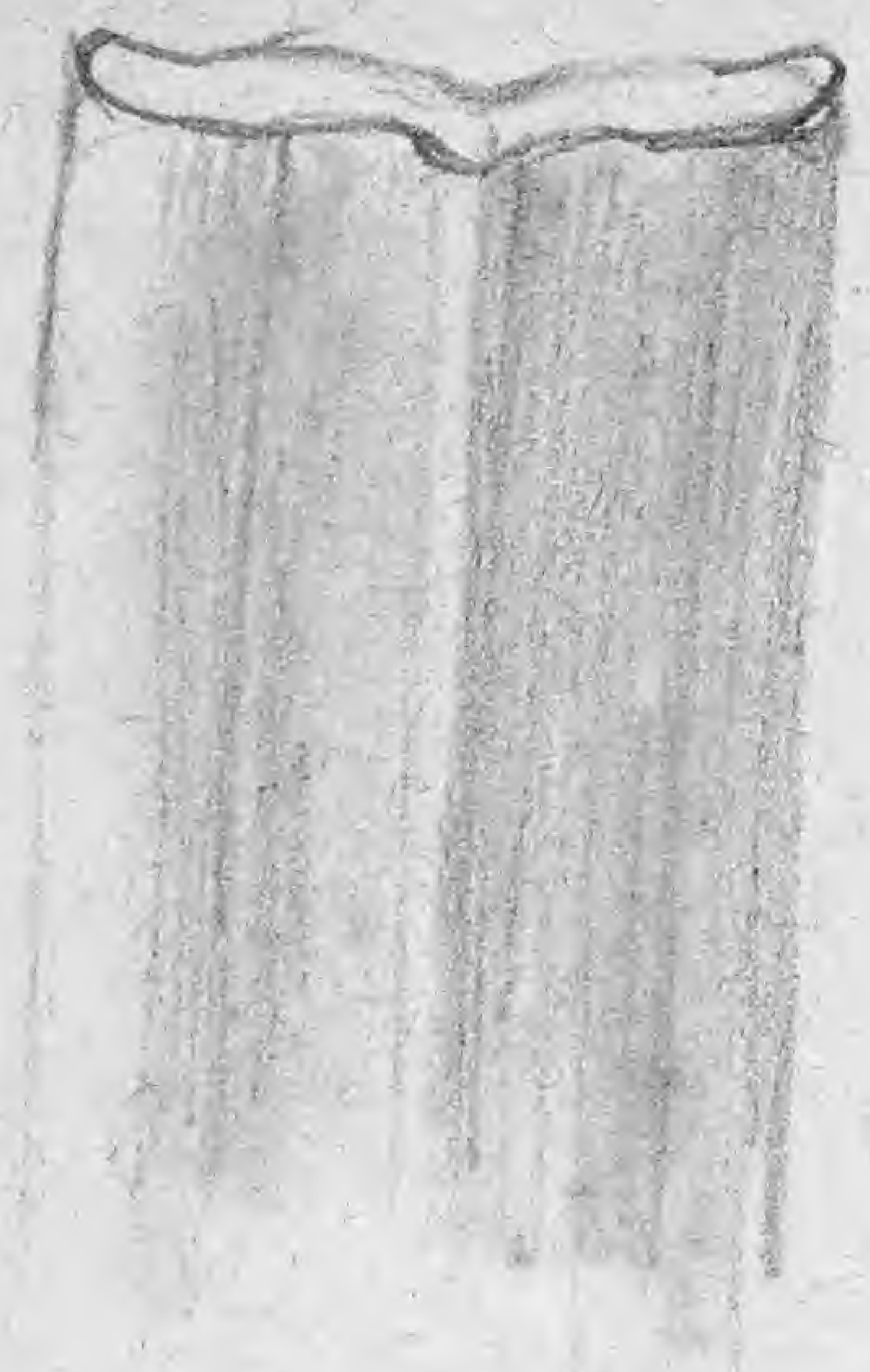
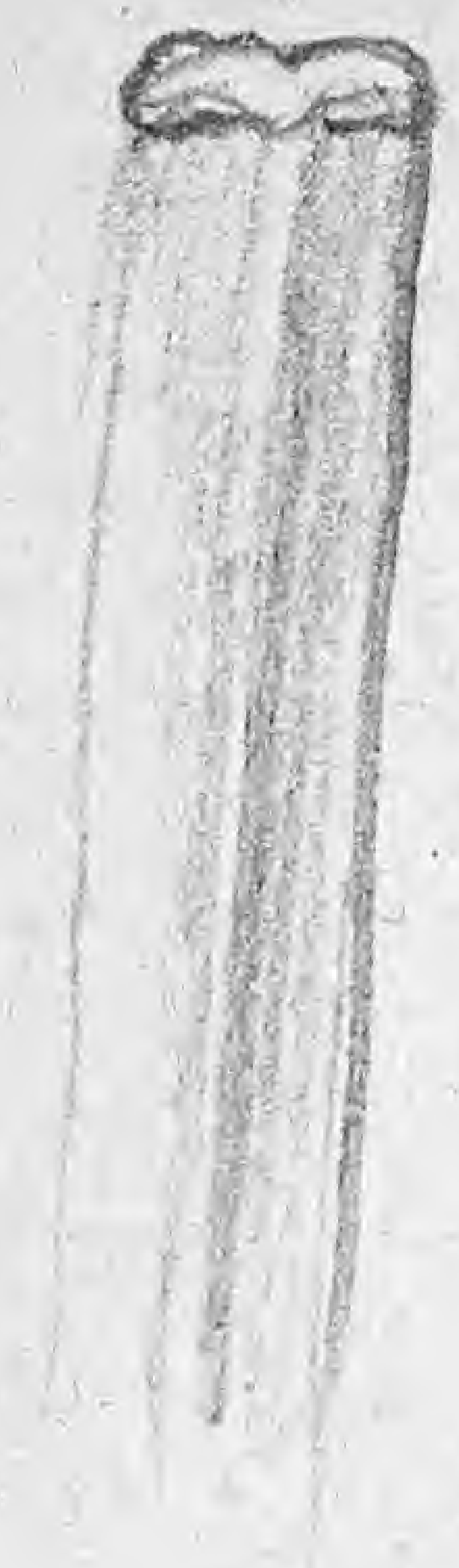
Lessingia graveolens
sensu
wislizenus



broader
leaves



narrower

back ; arachnoid tomentose

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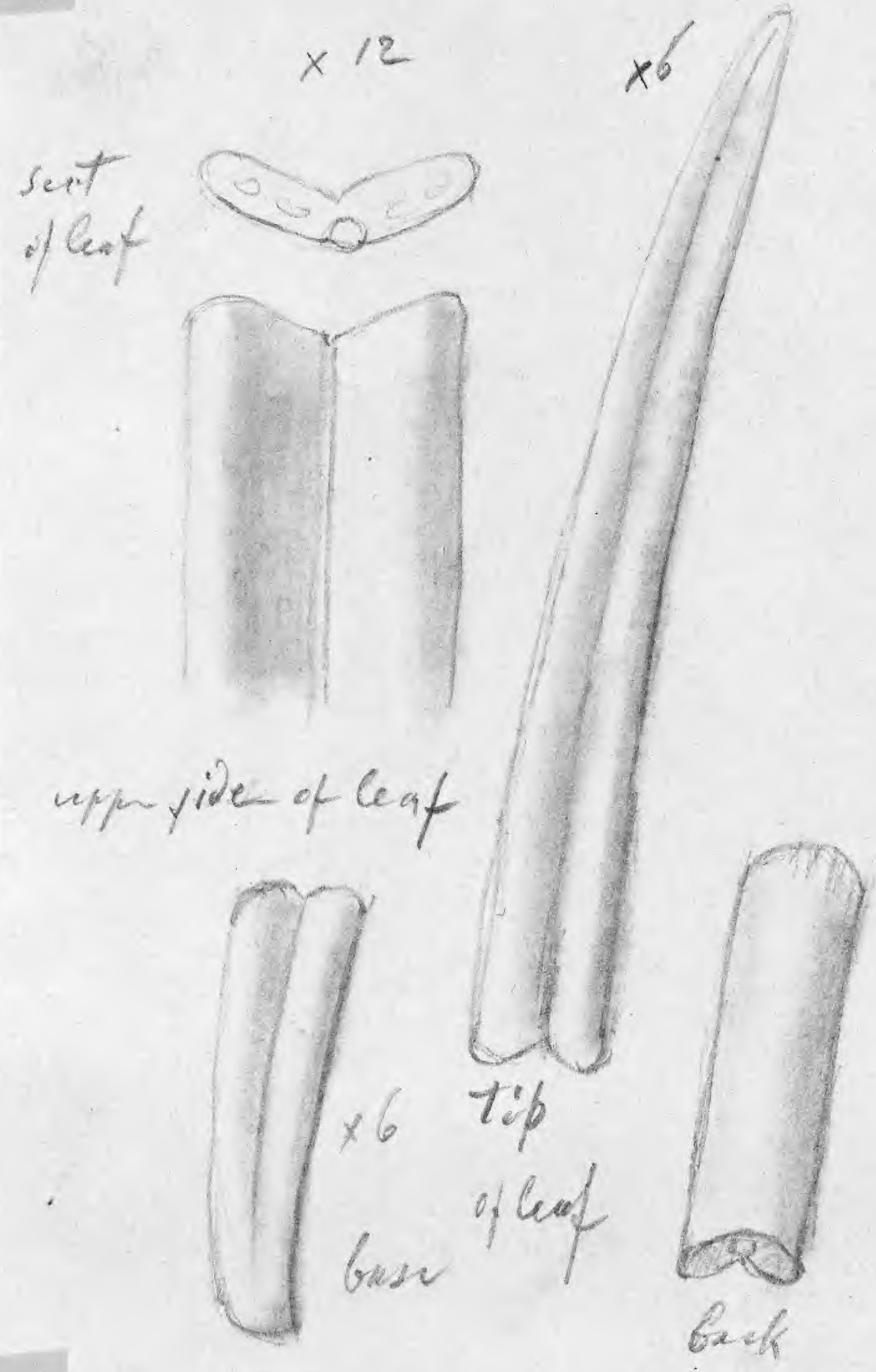
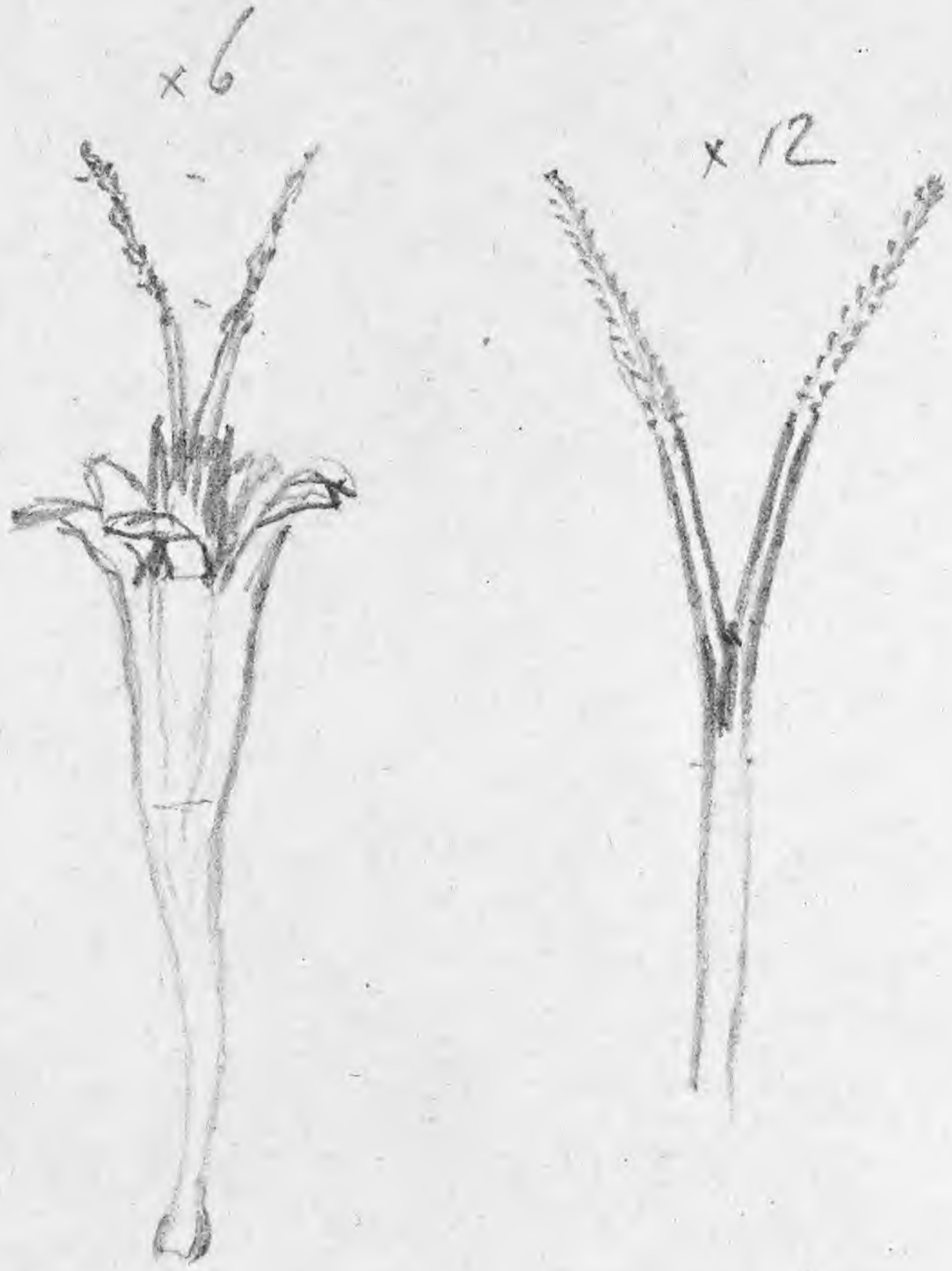
Nov 1860





Linosyris graveolens
~~glaberrima~~
var filifolia
Utah

Involucrum paucifolium; flores $\frac{1}{3}$ exserti
pappus corollam subaequans, valde inaequalis

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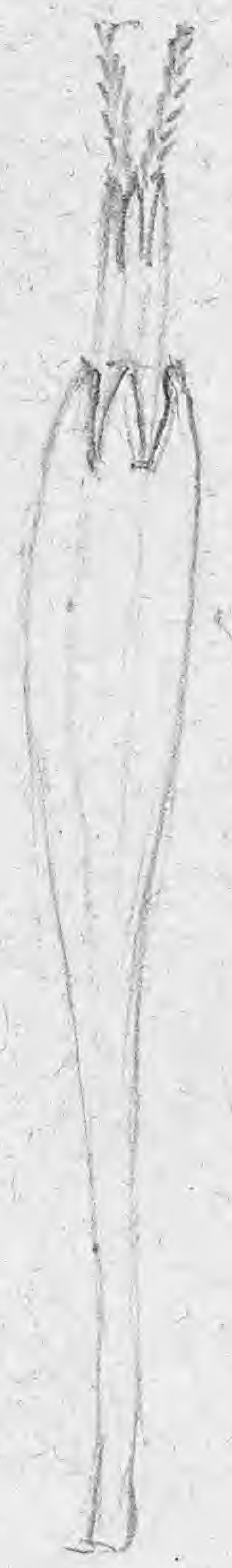
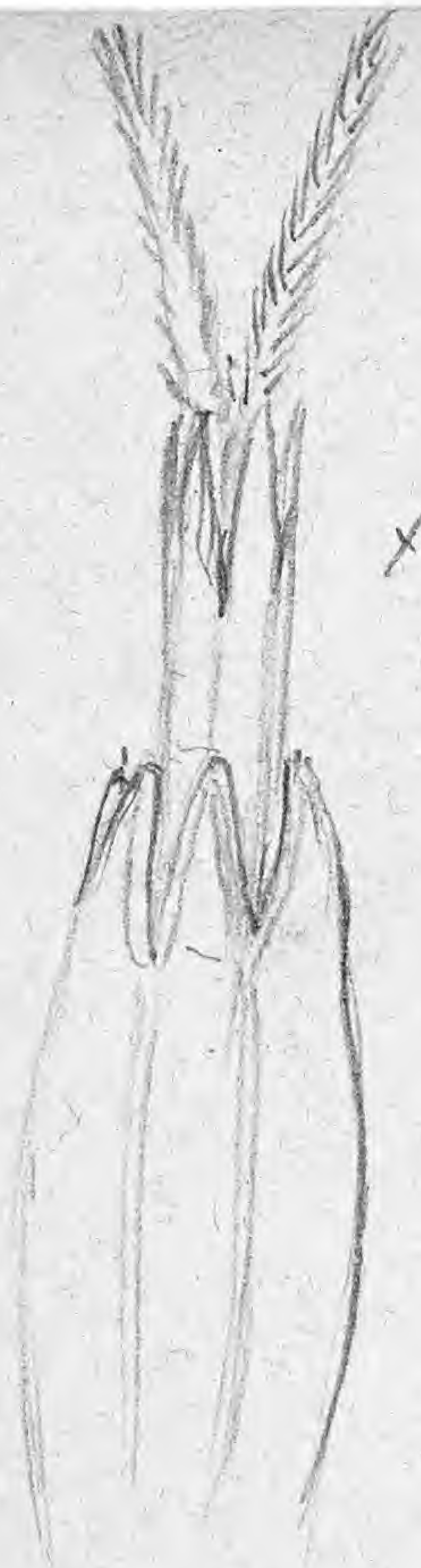
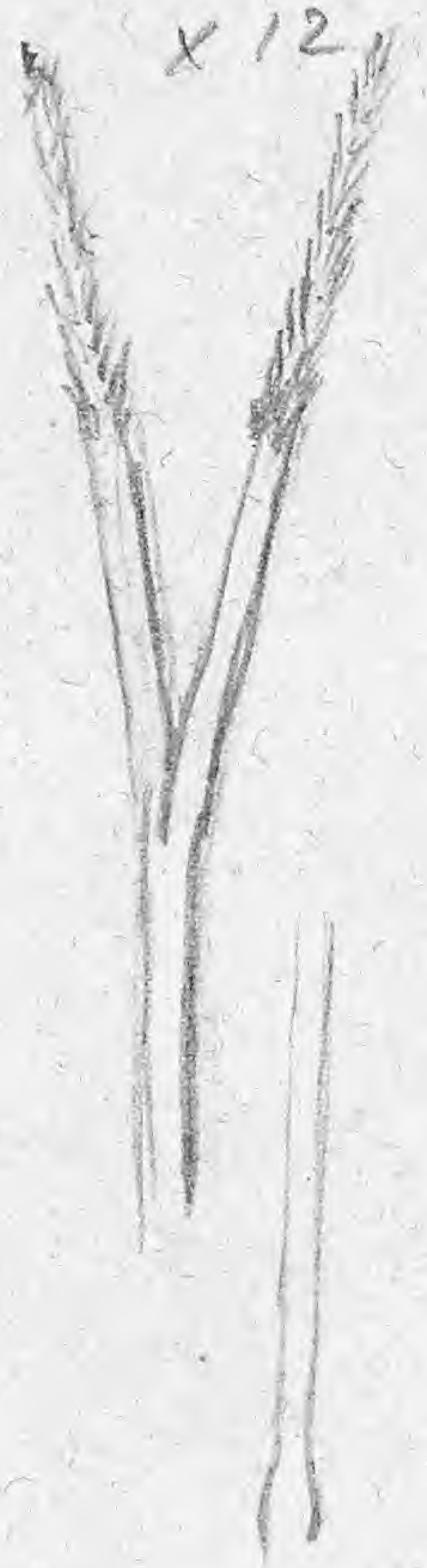
Wright 1186 Nov 1860







L. ~~p~~brevidens s. candicans n. sp.

arachnoideo-tomentosa, foliis linearibus integris, capit corymboso-fastigiatis pedicellatis squamis laxis sub bi-seriatis, ext. brevibus arachnoideis, floribus 1/3 exsertis bo supra ventricoso, dentibus. (over)

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brevissimis faucis constricti diametrum vix aequantibus;
pappo copioso capillaceo inaequali;
tubo breviori; stylo gracillimo basi
vix ~~bulb~~ incrassato

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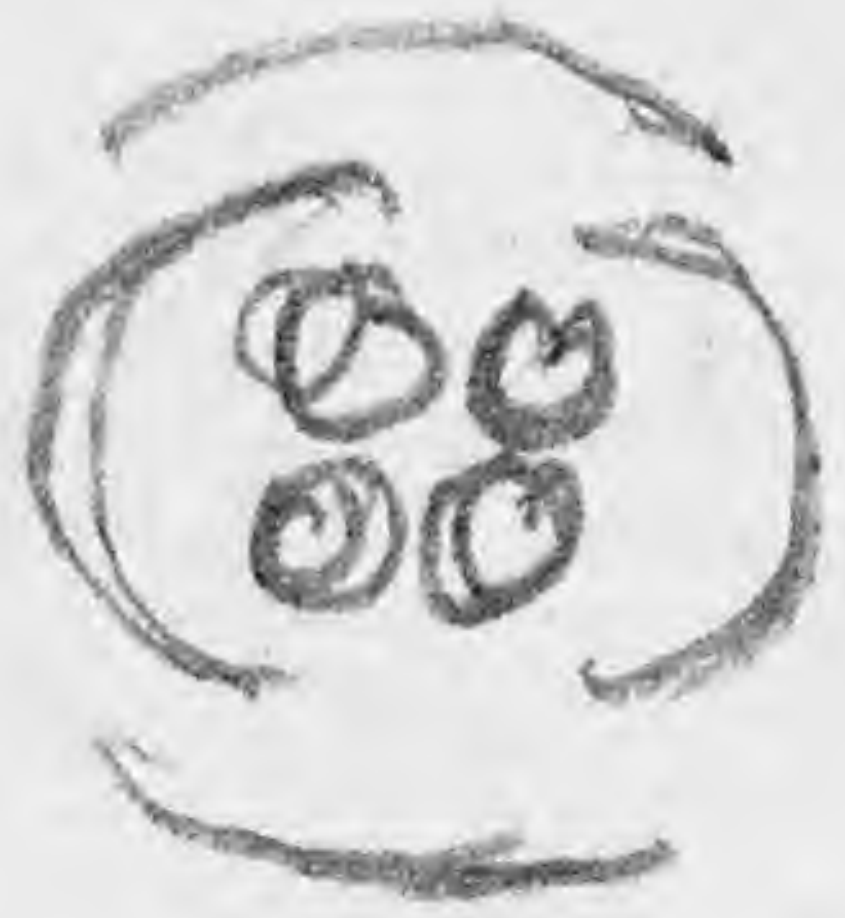
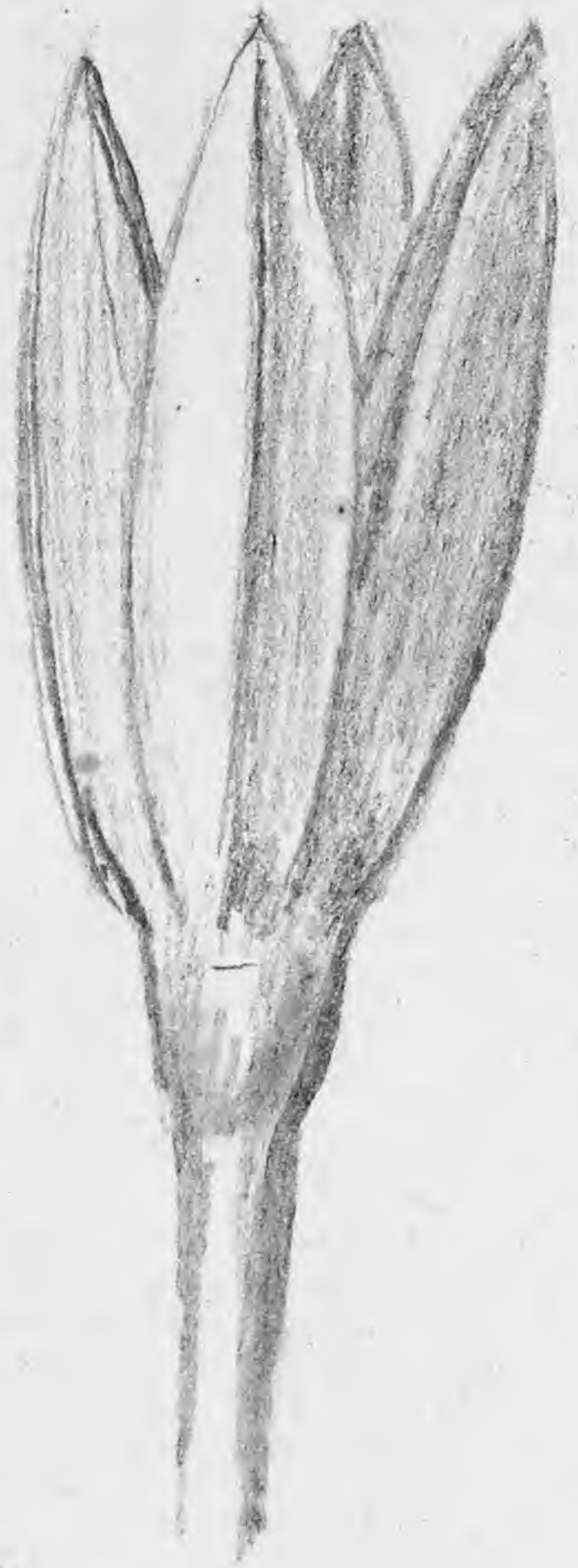
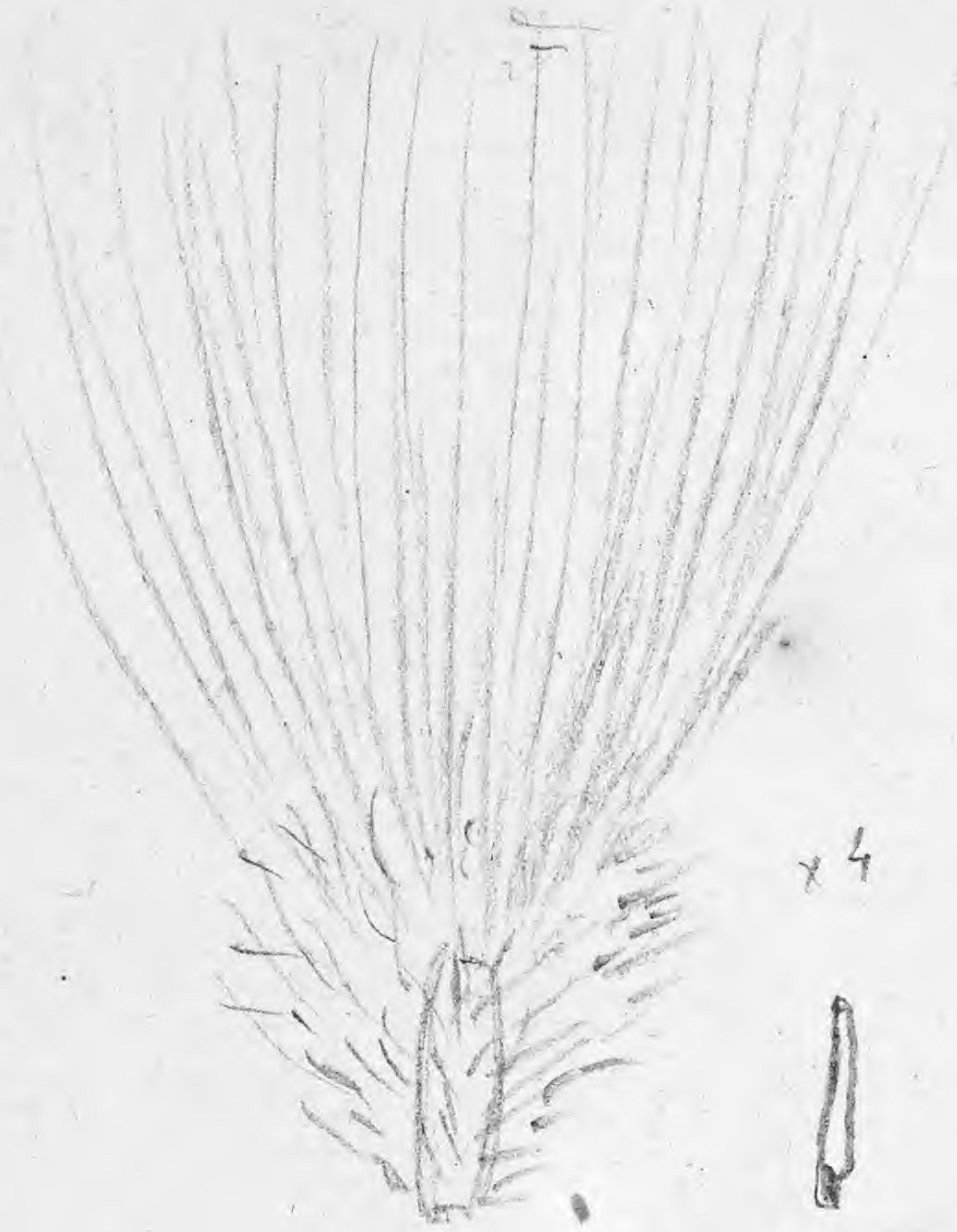
Tessaria borealis April 1861







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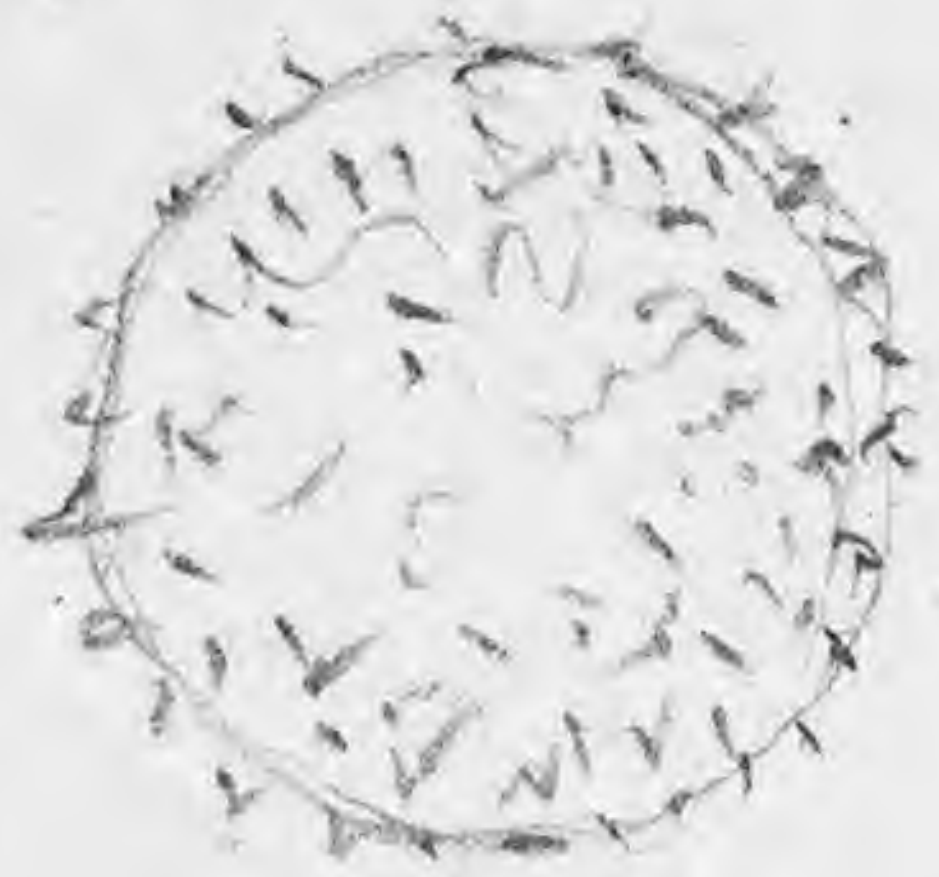
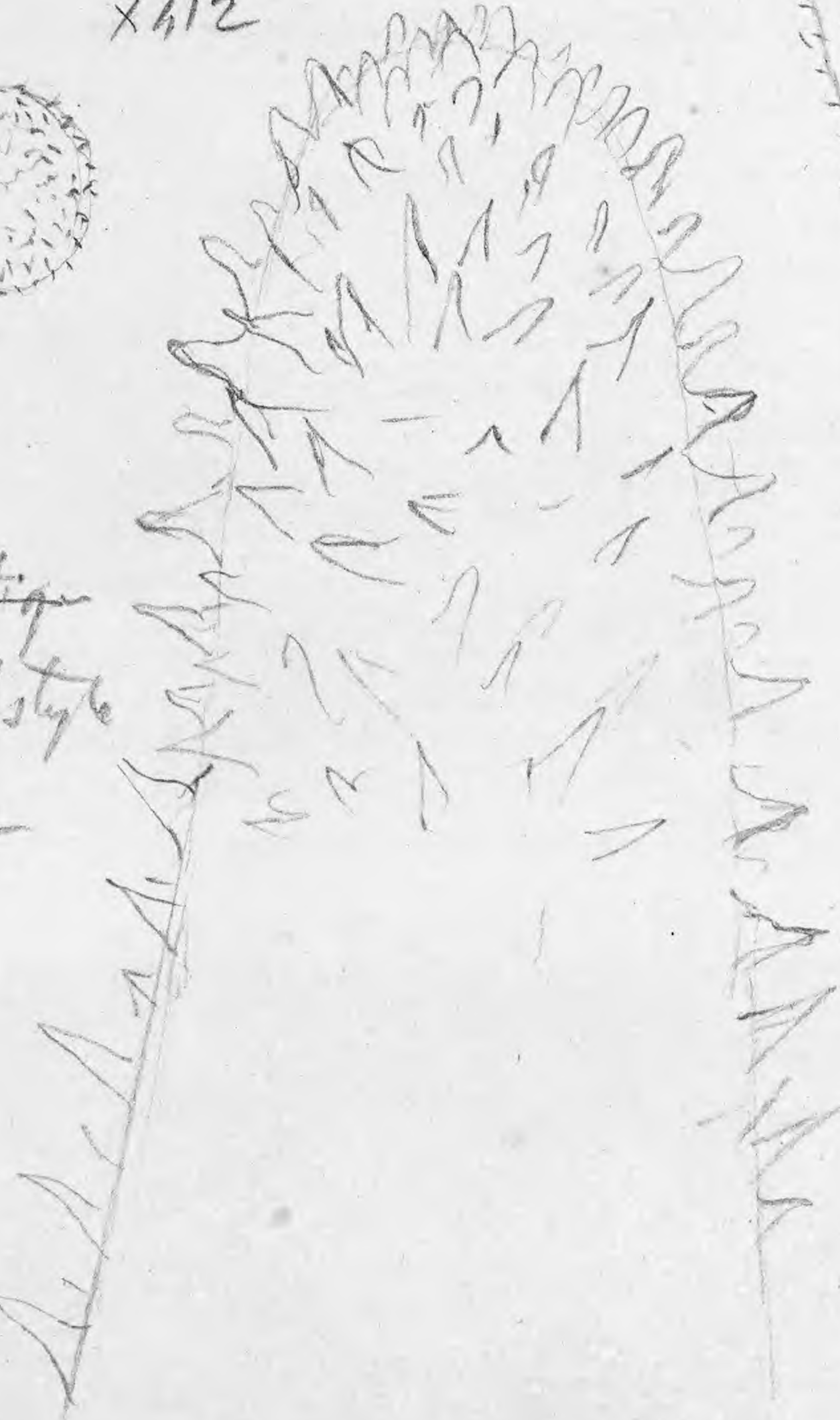
Taraxacum April 61

Pollen.

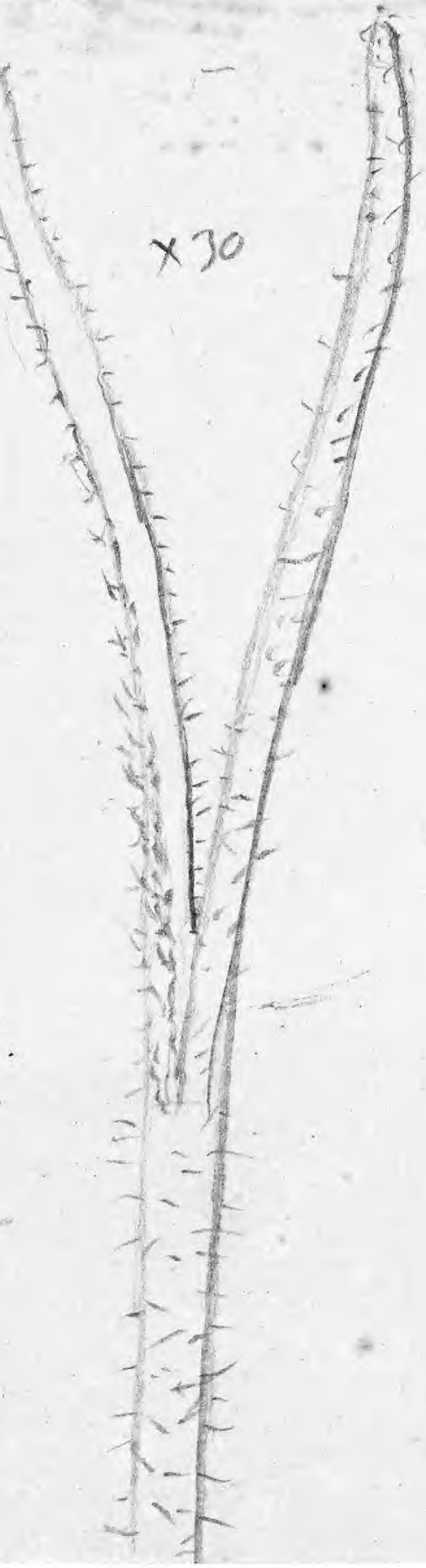


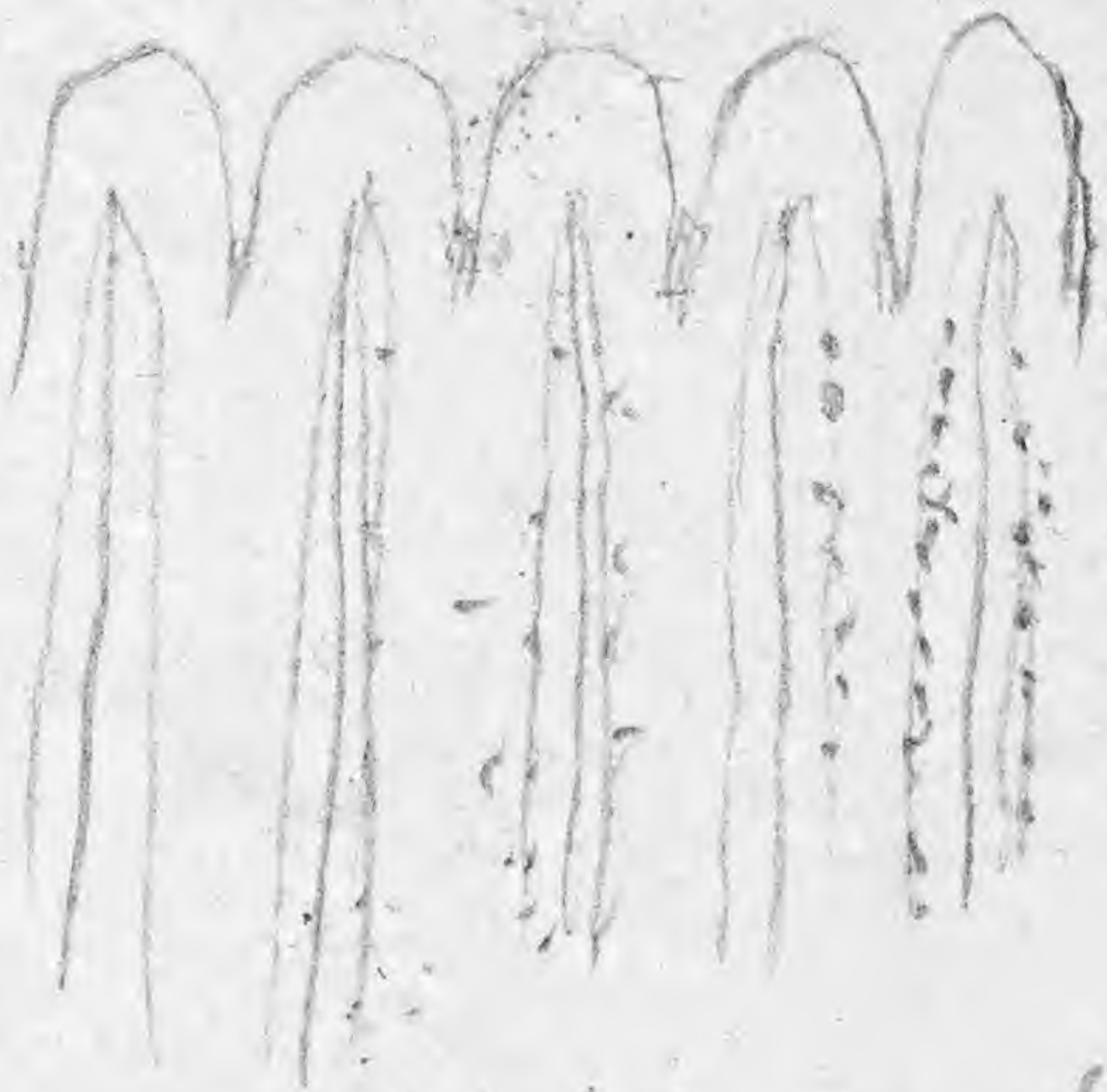
x412



tip of ~~stig~~
branch of style
back part

x30





x30

tip of anth

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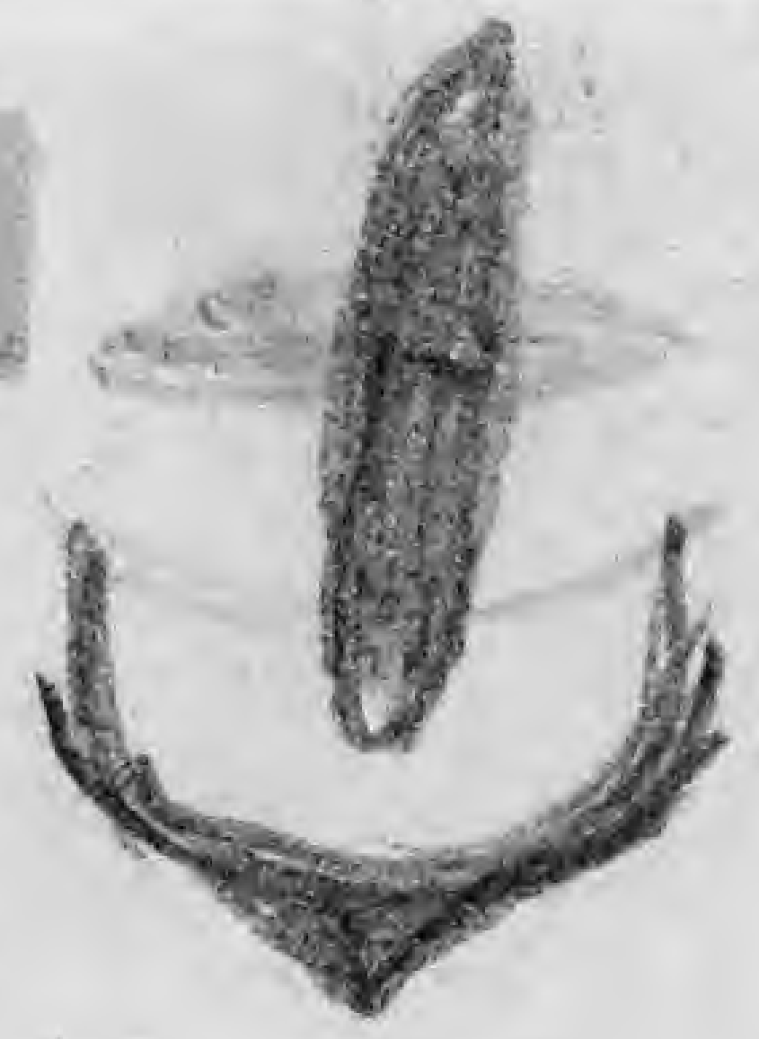
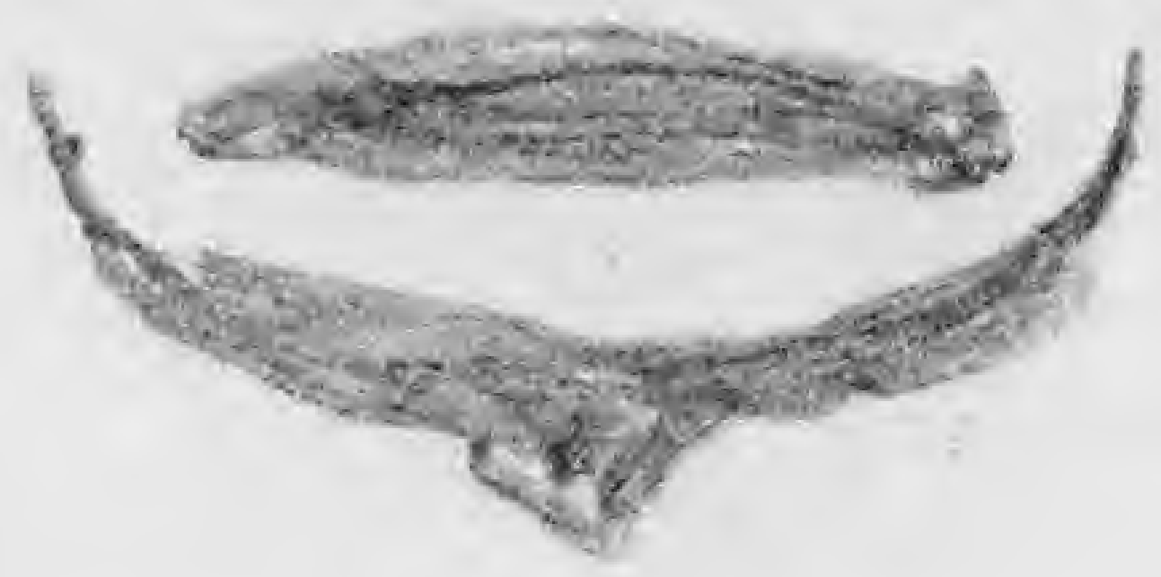


Achenia compressa seu lateraliter compressa

Helianthus
Verbesina
Actinomeris
Boltonia

compressed in the direction of the radius of the disc



Achenia obcompressa, seu a facie compressa

Silphium
Coreopsis
Bidens

compressed in the direction of the circumference of the disc

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**Leitch & Corliss**
DRUGGISTS
South west Fifth and Market Streets

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introduce here (before Compositae) the Cactaceae sent before

# Compositae.

Simpson's Report 1867

## Linosyris graveolens, Torrey and Gray, Fl. N. Am. 2. p. 234; Chrysocoma graveolens, Nuttall, Gen. 2. p. 136.

This handsome shrub, now ~~called~~ known under the popular name of Rabbit bush, is common along the eastern slope of the Rocky Mountains from the upper waters of the Missouri, along the Yellowstone River, the upper Platte and down to New Mexico; it crosses the Mountains into Oregon (Nuttall) and Utah but does not appear to extend far westwardly. It ~~usually~~ often grows in large ~~masses~~ patches together, ~~covering many acres of ground,~~ in creek and river bottoms ~~as well as~~ and rarely on sterile hills, often together with the Sagebushes.

Though quite variable in the shape and coating of the leaves and stem, all the different varieties of this species grow 3 – 5 (and, according to Nuttall (l. c.), even 8 feet high), forming stems of 3 or 4 inches thickness, very similar to the sage stems, with numerous more or less erect broomshaped branches, densely covered with narrow leaves and ~~topped~~ in August and September by abundant clusters of yellow flowerheads.

The specimens before me have been collected on Black's Fork of Green River, and the same form is said to be common over a great part of ~~eastern~~ Utah. I distinguish it as:

*Var. filifolia*: glabrata; foliis lineari-filiformibus crassiusculis supra canaliculatis infra convexis pallidis.

This shrub grows about 4 – 6 feet high; the stems become 3 – 4 inches thick, the bark of the stem is dark gray and finally scales off in narrow shreds; on the smaller branches it is smooth and white. The soft wood is very light brown or grayish, with white sap, marked with numerous medullary rays; the annual rings are very distinct and apparently easily separable, scarcely more than 1/3 line thick. The young branches are very pale green and smooth and are subdivided into numerous branchlets, crowded with very narrow, thickish, pale-green leaves, from 3/4 to 1 3/4 inches long and 1/2 to 3/4 lines wide,

* [illegible]

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getting smaller upwards, channeled above, rounded on the under side, entire on the margin, spreading, and, when old, often somewhat recurved. The numerous clustered heads terminate the fastigiate branches, covering the whole bush with a profusion of golden yellow flowers. The heads, born on ~~pedicels~~ pedicels of unequal length, are 6 lines long and 2 or 3 lines in diameter above, tapering to the base. The involucrum is 4 lines long and consists of about 3 series of very unequal scales, dry and shining, keeled and often slightlly glutinous on the back and somewhat rough on the margins. The flowers, 5 in number, are nearly 5 lines long and protrude 1/3 or 1/2 over the involucrum. The silky haired ovarium is crowned by a pappus of numerous capillary unequal bristles almost as long as the corolla, the linear spreading lobes of the corolla are longer than the ~~widening~~ diameter of the widened, almost funnelshaped tube.

*Var. tomentosa*; *L. graveolens var. β.* *Torr. & Gr. l.c.* was found near the mouth of Sweetwater River. It is characterized by the soft white pubescence of the stem and leaves and by the leaves being more erect and often longer and broader than in the last form.

Wright's nro. 1184 from the lower part of New Mexico, noticed in Gray's Pl. Wright. 2. p. 80., is still more densely covered by a silky white tomentum, has larger flowers with the tube of the corolla longer than the pappus, ventricose upwards, the connivent lobes shorter than the diameter of the throat. Can this possibly be a distinct species, or is the direction and proportion of the teeth or lobes of the corolla of little specific importance in these plants?

*Var. glabrata*: glabra, foliis lanceolato-linearibus planis laete virentibus.

Thus I characterize a shrub 4-6 feet high, with flat, darker green, lanceolate-linear, thinner leaves,

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narrower tube and shorter, more erect lobes of the corolla. It was found by Dr Hayden ~~to~~ covering the bottoms of the Yellowstone River. ~~It~~ This may possibly be the original *Chrysocoma dracunculoides*, *Pursh, Fl. 2. p. 517*, which Lewis and Clark brought from the banks of the Missouri; the name would not be inappropriate.

All the forms of this species have a heavy rather unpleasantly aromatic smell, whence the name.

Another very nearly allied species was also collected by the Expedition. It is:

*Linosyris pumila*, *Gray in Fl. Wright, 2 p. 80, note*; *Chrysothamnus pumilus*, *Nutt. in Trans. Am. Phil. Soc. (n. ser.) 7. p. 323*; *Linosyris serrulata*, *Torr. in Stansb. Rep. p. 389*; ~~The specimens~~ ~~It was found~~ on Sweet Water River; at Bridger's Pass and in the valley of the Timpanogas. ~~From~~ It is always a low shrub 6–12 inches high; ~~with~~ leaves flat, oblanceolate-linear, the broader ones (1½–2 lines wide, 1–1¼ inches long) distinctly 3-nerved, all rigid and very acute; the upper surface more or less scabrous, the lower covered with a very fine and soft pubescence or naked; the margin always roughly ciliate or (under a glass) spinulose-serrulate. The stem is roughly pubescent or more or less glabrous below, always rough upwards. The heads, in the specimens before me, are ~~always~~ 3 or 4-flowered, smaller than in the last species; the flowers scarcely protrude beyond the inner scales of the involucrum; the pappus is nearly as long as the corolla, the spreading lobes of which are slender and longer than the diameter of the throat.

*Crinitaria viscidiflora*, Hooker Fl. Bor. Am. 2. p. 24; *Linosyris viscidiflora*, Torrey & Gr. l. c. p. 234, is said by the latter authors and by Gray (Fl. Wright. ~~2 p. 80, note~~ l. c.) to be identical with this species, but Hooker distinctly states, that it forms a shrub 2–4 feet high with very glabrous single-nerved and entire leaves. May it therefore not be the same as my *var. glabrata* of *L. graveolens*?

G. Engelmann

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